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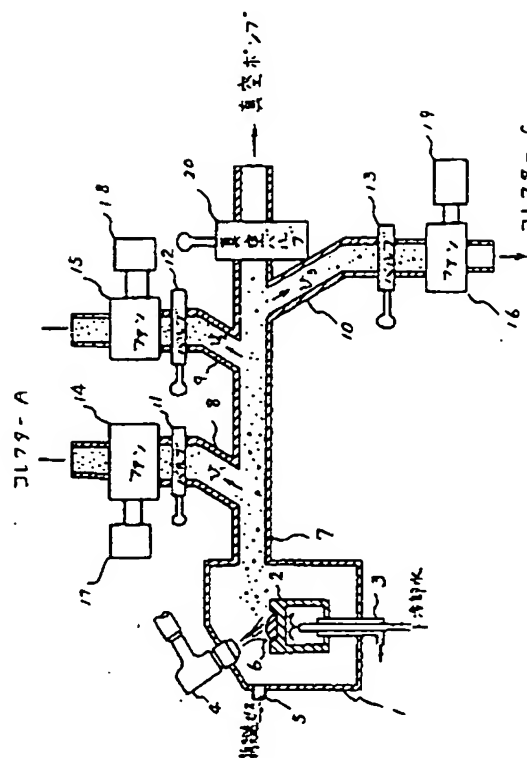
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TITLE : MANUFACTURE APPARATUS OF
ULTRAFINE METALLIC POWDER



ABSTRACT : PURPOSE: To provide a titled apparatus suitable for obtaining classified ultrafine powder having uniform particle diameter by heating, melting, and evaporating a metal in an evaporation vessel having low partial pressure of oxygen, and classifying the formed ultrafine powder by flow velocity with plural classifiers provided in parallel with a flow passage.

CONSTITUTION: A metal 2 such as Ni contained in a crucible 2 is heated, melted, and evaporated in an evaporator 1 having low partial pressure of oxygen with a source of heat of high energy such as a plasma arc, and the evaporator 1 is connected with a vacuum pump (not shown in the figure) through a connecting pipe 7 and a vacuum valve 20. An inert gas such as Ar or a mixed gas contg. H_2 is introduced into a manufacturing apparatus of ultrafine metallic powder from a carrier gas introducing port 5. Plural flow passages 8, 9, and 10 are respectively connected to said connecting pipe 7, and fans 14, 15, and 16 which are controlled by controllers 17, 18, and 19 are provided to each passage. The ultrafine metallic powder having respective particle diameter in corresponding with respective flow velocities of the carrier gas V_1 , V_2 , and V_3 in each passage 8, 9, and 10 is classified and manufactured. The ultrafine metallic powder is efficiently collected and recovered at respective collectors.

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